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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LE, LANA N

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/784,132	Applicant(s) SALFELNER, ANTON	
	Examiner Lana N. Le	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 8-12, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Bergveld et al (US 6,298,222).

Regarding claim 1, Bergveld et al disclose a circuit arrangement (figs. 1-3) for transmitting and receiving radio signals, comprising:

an amplification device (4) including an output (5) for transmitting signals, an input (6) for receiving signals and a supply line (from 7); and an antenna (13) for transmitting and receiving signals, the antenna (13) connected to the output of the amplification device (4) (col 2, lines 40-52);

wherein the output (5) of the amplification device (4) is an input (input 15 to data receiver 11) for a signal received via the antenna (13), wherein the amplification device (4) is for converting the signal received via the antenna (13) into a converted signal (converted via 4), and wherein the supply line (output to 7 via 16, 25) is an output for the converted signal (col 2, lines 48-67).

Regarding claim 8, Bergveld et al disclose circuit arrangement of claim 1, wherein the converted signal is a modulated supply current (output power of 4 is output by

controlling supply current/supply voltage of amplifier 4; col 2, lines 43-47).

Regarding claim 9, Bergveld et al disclose circuit arrangement of claim 8, including a device (11) coupled to the supply line (9) (via 16; fig. 3) for detecting and demodulating the converted signal (col 3, lines 8-11).

Regarding claim 10, Bergveld et al disclose circuit arrangement of claim 1, wherein the converted signal is a modulated voltage drop on the supply line (by controlling the supply voltage of amplifier 4 to drop on supply line 9, 7 via 25).

Regarding claim 11, Bergveld et al disclose circuit arrangement of claim 10, including a device (11) coupled to the supply line (9) (via 16; fig. 3) for detecting and demodulating the converted signal (col 3, lines 8-11).

Regarding claim 12, Bergveld et al disclose circuit arrangement of claim 1, including a device (11) coupled to the supply line (9) (via 16; fig. 3) for detecting and demodulating the converted signal (col 3, lines 8-11).

Regarding claim 17, Bergveld et al disclose circuit arrangement of claim 1, operable for transmitting and receiving radio signals nonsimultaneously (where the power command from the base station does not need to be received at the same time the power amplifier output a transmission signal; col 3, lines 11-18).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Bartlett (US 6,232,841).

Regarding claim 2, Bergveld et al disclose the circuit arrangement of claim 1, wherein the amplification device includes a supercritical power amplifier in a C-E mode of operation. Bergveld et al does not disclose the amplification device includes a supercritical power amplifier in a C-E mode of operation. Bartlett discloses a circuit where the amplification device includes a supercritical power amplifier in a C-E mode of operation (col 2, lines 25-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the PA in a C-E mode in order to provide high Q to keep output filtering to a minimum and the frequency agility for broad bandwidth as suggested by Bartlett.

Regarding claim 3, Bergveld et al and Bartlett disclose the circuit arrangement of claim 2, wherein Bergveld et al disclose including a device (11) coupled to the supply line (9) (via 16; fig. 3) for detecting and demodulating the converted signal (col 3, lines 8-11).

Regarding claim 4, Bergveld et al and Bartlett disclose the circuit arrangement of claim 2, wherein Bergveld et al disclose the converted signal is a modulated supply current (output power of 4 is output by controlling supply current/supply voltage of amplifier 4; col 2, lines 43-47).

Regarding claim 5, Bergveld et al and Bartlett disclose the circuit arrangement of

claim 4, including a device (11) coupled to the supply line (9, 7) for detecting and demodulating the converted signal (col 3, lines 8-11).

Regarding claim 6, Bergveld et al and Bartlett disclose the circuit arrangement of claim 2, wherein the converted signal is a modulated voltage drop on the supply line (by controlling the supply voltage of amplifier 4 to drop on supply line 9, 7).

Regarding claim 7, Bergveld et al and Bartlett disclose the circuit arrangement of claim 6, including a device (11) coupled to the supply line (9, 7) for detecting and demodulating the converted signal (col 3, lines 8-11).

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Bruckert et al (US 6,094,428).

Regarding claim 13, Bergveld et al disclose circuit arrangement of claim 1, wherein Bergveld et al do not disclose a transmission rate associated with symbols transmitted by the amplification device is different than a reception rate associated with symbols received by the amplification device. Bruckert et al disclose a transmission rate associated with symbols transmitted by the amplification device is different than a reception rate associated with symbols received by the amplification device (col 5, lines 12-29; col 6, lines 33-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the transmission rate be different than the reception rate in order to utilize continuous reverse channel transmission taking into account power control commands received from the base station (col 1, lines 55-63).

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Tanji et al (US 6,943,618).

Regarding claim 14, Bergveld et al disclose circuit arrangement of claim 1, wherein Bergveld et al do not disclose the circuit arrangement is provided as a transceiver of FSK-modulated data. Tanji et al disclose a circuit arrangement provided as a transceiver of FSK-modulated data (col 7, lines 14-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the amplifier of Bergveld be in a FSK transceiver in order to allow control of the power amplifier to transmit a signal at a relatively low power level to conserve system power as suggested by Tanji et al (col 7, lines 15-38).

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Sterzer (US 3,636,461).

Regarding claim 18, Bergveld et al disclose a method for frequency conversion in an amplification device having an input for a supply current, a signal input and a signal output, comprising:

applying a first signal to the signal input of the amplification device with nondiminishing amplitude; applying a second signal to the signal output of the amplification device; and converting the second signal into the supply current. Bergveld et al do not disclose operating the amplification device in a supercritical range. Sterzer discloses operating the amplification device in a supercritical range (col 1, lines 55-69). It would have been obvious to one of ordinary skill in the art at the time the invention was made to operate the amplifier in a supercritical range in order to amplify microwave signals at frequencies close to the transmit-time frequencies of the diode for stable linear amplification as suggested by Sterzer.

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8. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Sterzer (US 3,636,461) and further in view of Sherwood (US 3,988,655).

Regarding claim 19, Bergveld et al and Sterzer disclose method of claim 18, wherein Bergveld et al and Sterzer do not disclose the method including monitoring the supply current over time to detect movement in a 3-dimensional area. Sherwood discloses a method of monitoring the supply current over time to detect movement in a 3-dimensional area (col 1, lines 44-52; col 2, lines 1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to detect movement in a three dimensional space of the power supply in order to provide the necessary power supply current to drive a moving mechanism in a three dimensional space.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Sterzer (US 3,636,461) and further in view of Shimazaki et al (US 2002/0,045,995).

Regarding claim 20, Bergveld et al and Sterzer disclose method of claim 18, wherein Bergveld et al and Sterzer do not disclose the method including monitoring the supply current over time to detect a change in an object over time. Shimazaki et al disclose a method including monitoring the supply current over time to detect a change in an object over time (para. 392). It would have been obvious to one of ordinary skill in the art at the time the invention was made to monitor the supply current over time to detect a change in an object over time in order monitor for electromagnetic interference

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and noise generated by the power supply as suggested by Shimazaki et al (para. 9, 390).

Allowable Subject Matter

10. Claims 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 15, Bergveld et al disclose circuit arrangement of claim 1, wherein Bergveld et al and the cited prior art do not disclose the amplification device is for transmitting an outgoing signal via the antenna to an object whose reflection behavior changes over time, and wherein the amplification device is further for monitoring the converted signal during said transmission of the outgoing signal to detect a change in the object over time.

Regarding claim 16, Bergveld et al disclose circuit arrangement of claim 1, wherein Bergveld et al and the cited prior art do not disclose the amplification device is for transmitting an outgoing signal via the antenna into a spatially limited area, and wherein the amplification device is further for monitoring the converted signal during said transmission of the outgoing signal to detect a change within the area over time.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana N. Le whose telephone number is (571) 272-7891. The examiner can normally be reached on M-F 9:30-18:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lana Le

Lana N. Le
5-15-06

**LANA LE
PRIMARY EXAMINER**